

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012666**Date Inspected:** 17-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Bernard Docena, Jesse Cayabayab, CWI Presingham			Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No N/A
				Delayed / Cancelled:	Yes	No N/A
Bridge No:	34-0006			Component:	SAS OBG 2E/3E-A 1E/2E-E-2	

Summary of Items Observed:

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified as 1E/2E-D and 2E/3E-E the following observations were made:

1E/2E -D

Upon the arrival of the QA Inspector randomly observed the American Bridge/Fluor (ABF) welder Salvador Sandoval assisting the ABF Assistant Welding Superintendent Dan Ieraci set up the plasma arc gouging machine. The QA Inspector randomly observed the ABF representatives set up the bug-o track system with the plasma arc gouging machine attached to it (pictured below), to allow a semi-automated back gouging system to be utilized. The QA Inspector noted the opposite side of the above identified weld joint was previously completed. The QA Inspector noted the plasma arc gouging machine was being set up to remove the steel backing bar from the external surface of the orthotropic box girder (OBG), and perform the back gouge of the weld joint. The QA Inspector was informed by Mr. Ieraci, he would be training the ABF welder Salvador Sandoval on how to use the machine. The QA Inspector randomly observed Mr. Ieraci begin performing the plasma arc gouging in an attempt to remove the steel backing. The QA Inspector noted Mr. Ieraci struggled with the machine for the first pass. The QA Inspector noted the plasma arc gouging system appeared to scarf approximately 3-4mm of steel backing. The QA Inspector randomly observed and noted the back gouging appeared to be a slow process. It was observed the back gouging process started at 0800 and only one pass had been performed by the 1000 break. The QA Inspector noted the ABF personnel identified above spent the remainder of the QA Inspectors shift attempting to remove the steel backing bar. The QA Inspector noted the steel backing bar appeared to be approximately half way gouged off by the end of the QA Inspectors shift.

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1E/2E-D/S 1-18

The QA Inspector randomly observed the SE QC Inspector and ultrasonic testing (UT) Technician Tom Pasqualone perform UT of 100% of the complete joint penetration (CJP) groove welds associated with the longitudinal stiffener plates. The QA Inspector noted the QC Inspector did not locate any rejectable indications at the time of the testing. After the UT was completed, the QA Inspector randomly observed the QC Inspector indicate directly on the base material the UT was acceptable.

2E/3E-E-2

The QA Inspector randomly observed the ABF welders had previously started the induction heating blankets to ensure the minimum required preheat of 150°F was achieved prior to welding. The QA Inspector randomly verified utilizing a 150°F temperature indicating marker and noted the minimum required preheat had been achieved. The QA Inspector observed the ABF welder to be utilizing a semi automated FCAW track system for welding the above identified weld joint. The QA Inspector randomly observed the Smith Emery (SE) QC Inspector identified as Bernard Docena set the FCAW machine to the parameters of the approved WPS identified as ABF-WPS-D1.5-3042A-1. The QA Inspector randomly observed the FCAW parameters were 274 Amps, 21.7 Volts and a travel speed of 266mm/min. The QA Inspector randomly observed the ABF welder Jeremy Doleman continued the FCAW fill pass, once the semi automated track system reached a certain point the ABF welder Rory Hogan would observe the welding arc for the remainder of the weld. The QA Inspector noted the ABF welders did not complete the section of weld in C2 on the QA Inspectors shift.



Summary of Conversations:

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

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Inspected By: Bettencourt,Rick

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer